

CONTENTS OF VOLUME 35

- Adamek, E. G. and Purves, C. B.** The divergent behavior of the hydroxides of lithium, sodium, and of potassium, rubidium, and cesium in the xanthation of cellulose and starch, 960.
- Adams, G. A.** Constitution of a water soluble hemicellulose from American beechwood (*Fagus grandifolia*), 556.
See also Schmorak, J., 108.
- Alexander, W. A.** See Rayson, H. W., 1571.
- Allentoff, N. and Wright, G. F.** The reduction, enolate formation, and solvolysis of Grignard reagents in optically active media, 900.
- Anderson, H. J.** Pyrrole chemistry. I. Substitution reactions of 1-methylpyrrole, 21.
- Anet, F. A. L. and Bavin, P. M. G.** Studies in the Wagner-Meerwein rearrangement. Part II, 1084.
- Anet, F. A. L., Bavin, P. M. G., and Dewar, M. J. S.** The reaction of nitromethane with fluorenone and benzophenone in polyphosphoric acid, 180.
- Anet, R., Clayton, D. W., and Marion, L.** Some oxidation reactions of delcosine, 397.
- Archambault, J. and Rivest, R.** Détermination du degré de solvation du mono-*n*-butoxytrichlorotitane dans le butanol, 879.
- Armour, C. A. and Ryan, D. E.** *N*-Acyl substituted phenylhydroxylamines: The effect of radical change on analytical behavior, 1454.
- Armstrong, A. M. and Halpern, J.** Kinetics of the oxidation of mercury(I) by thallium(III) in aqueous solution, 1020.
- Atkinson, G. F. and McBryde, W. A. E.** Oxidation of the analytical reagent "tiron" (disodium-4,5-dihydroxybenzene-1,3-disulphonate), 477.
- Baerg, A. P. and Bartholomew, R. M.** Yields in U^{235} thermal neutron fission, 980.
- Bakhtiar, A. K.** See Miller, G. H., 584.
- Bannard, R. A. B.** See Cockburn, W. F., 1285.
- Bardwell, J. and Dyne, P. J.** Radiation-induced exchange of deuterium between heavy water and dissolved hydrogen, 82.
- Bartholomew, R. M.** See Baerg, A. P., 980.
- Barton, G. M.** See Gardner, J. A. F., 1039.
- Bauer, H. F.** See von Rudloff, E., 315.
- Bavin, P. M. G.** See Anet, F. A. L., 180, 1084.
- Bavin, P. M. G. and Canady, W. J.** Correlation of O-H stretching frequencies with pK values for some phenols, 1555.
- Bayley, C. H.** See Gingras, B. A., 599.
- Beebe, R. A.** See Holmes, J. M., 1542.
- Belleau, B.** Synthesis in the field of the *Erythrina* alkaloids. Part I. The synthesis of hexahydroapoerysotrine, 651.
Synthesis in the field of the *Erythrina* alkaloids. Part II. Approaches to the ring system of β -erythroidine, 663.
The Prins reaction with β,γ -unsaturated acids and amides, 673.
- Benson, G. C.** See Goddard, E. D., 986; van Zeggeren, F., 1150.
- Bernstein, H. J.** See Pople, J. A., 1060; Schneider, W. G., 1487; Wilmshurst, J. K., 191, 226, 734, 911, 969, 1183; Yoshino, T., 339.
- Bernstein, H. J., Pople, J. A., and Schneider, W. G.** The analysis of nuclear magnetic resonance spectra. I. Systems of two and three nuclei, 65.
- Betts, E. E. and MacLean, D. B.** *Lycopodium* alkaloids. V. Oxidation and reduction studies on annontinine and its derivatives, 211.
- Bishop, C. T.** Synthesis of 3,5-di-*O*-methyl-D-glucose, 61.
Constitution of an arabogalactan from jack pine (*Pinus banksiana* Lamb), 1010.
See also Schmorak, J., 108.
- Blanchard, L. P., Farmer, J. B., and Ouellet, C.** An investigation of the gas-phase oxidation of acetaldehyde by means of a rapid-scanning mass spectrometer, 115.
- Blanchard, L. P. and Le Goff, P.** Mass spectrometric study of the species CS, SO, and CCl₂ produced in primary heterogeneous reactions, 89.
- Blanchfield, R.** See Grant, G. A., 40; Smith, D. M., 156.
- Bockris, J. O'M.** See Conway, B. E., 1124.
- Boivin, J. L. and Tremblay, M.** Preparation of guanidine from ammonium thiocyanate, sulphur dioxide, and ammonia under pressure, 1260.
- Bolton, J. R. and McCallum, K. J.** Effect of changes in hydration on recoil fragments in neutron-irradiated permanganates, 761.
- Braun, R. O.** See McKay, A. F., 843.
- Breck, W. G.** See Frost, G. B., 1446.
- Bricknell, A. G., Trevo, L. W., and Spinks, J. W. T.** A study of sulphate in nitrocellulose using $S^{32}O_4^{2-}$ as tracer, 704.
- Bright, N. F. H.** See Morton, J. M., 1097.
- Brown, W. H. and Wright, G. F.** The syntheses and reactions of alkylated furans, 236.
- Brownell, H. H. and Purves, C. B.** The location and distribution of substituents in a purified hydroxyethyl cellulose, 677.
- Bryce, W. A.** See Kebabian, P., 576; Ryce, S. A., 1293.
- Burland, P. D. and Christian, J. D.** A note on ureido derivatives isolated as by-products in amino acid synthesis, 444.

CONTENTS OF VOLUME 35

- Adamek, E. G. and Purves, C. B.** The divergent behavior of the hydroxides of lithium, sodium, and of potassium, rubidium, and cesium in the xanthation of cellulose and starch, 960.
- Adams, G. A.** Constitution of a water soluble hemicellulose from American beechwood (*Fagus grandifolia*), 556.
See also Schmorak, J., 108.
- Alexander, W. A.** See Rayson, H. W., 1571.
- Allentoff, N. and Wright, G. F.** The reduction, enolate formation, and solvolysis of Grignard reagents in optically active media, 900.
- Anderson, H. J.** Pyrrole chemistry. I. Substitution reactions of 1-methylpyrrole, 21.
- Anet, F. A. L. and Bavin, P. M. G.** Studies in the Wagner-Meerwein rearrangement. Part II, 1084.
- Anet, F. A. L., Bavin, P. M. G., and Dewar, M. J. S.** The reaction of nitromethane with fluorenone and benzophenone in polyphosphoric acid, 180.
- Anet, R., Clayton, D. W., and Marion, L.** Some oxidation reactions of delcosine, 397.
- Archambault, J. and Rivest, R.** Détermination du degré de solvation du mono-*n*-butoxytrichlorotitane dans le butanol, 879.
- Armour, C. A. and Ryan, D. E.** *N*-Acyl substituted phenylhydroxylamines: The effect of radical change on analytical behavior, 1454.
- Armstrong, A. M. and Halpern, J.** Kinetics of the oxidation of mercury(I) by thallium(III) in aqueous solution, 1020.
- Atkinson, G. F. and McBryde, W. A. E.** Oxidation of the analytical reagent "tiron" (disodium-4,5-dihydroxybenzene-1,3-disulphonate), 477.
- Baerg, A. P. and Bartholomew, R. M.** Yields in U^{235} thermal neutron fission, 980.
- Bakhtiar, A. K.** See Miller, G. H., 584.
- Bannard, R. A. B.** See Cockburn, W. F., 1285.
- Bardwell, J. and Dyne, P. J.** Radiation-induced exchange of deuterium between heavy water and dissolved hydrogen, 82.
- Bartholomew, R. M.** See Baerg, A. P., 980.
- Barton, G. M.** See Gardner, J. A. F., 1039.
- Bauer, H. F.** See von Rudloff, E., 315.
- Bavin, P. M. G.** See Anet, F. A. L., 180, 1084.
- Bavin, P. M. G. and Canady, W. J.** Correlation of O-H stretching frequencies with pK values for some phenols, 1555.
- Bayley, C. H.** See Gingras, B. A., 599.
- Beebe, R. A.** See Holmes, J. M., 1542.
- Belleau, B.** Synthesis in the field of the *Erythrina* alkaloids. Part I. The synthesis of hexahydroapoerysotrine, 651.
Synthesis in the field of the *Erythrina* alkaloids. Part II. Approaches to the ring system of β -erythroidine, 663.
The Prins reaction with β,γ -unsaturated acids and amides, 673.
- Benson, G. C.** See Goddard, E. D., 986; van Zeggeren, F., 1150.
- Bernstein, H. J.** See Pople, J. A., 1060; Schneider, W. G., 1487; Wilmshurst, J. K., 191, 226, 734, 911, 969, 1183; Yoshino, T., 339.
- Bernstein, H. J., Pople, J. A., and Schneider, W. G.** The analysis of nuclear magnetic resonance spectra. I. Systems of two and three nuclei, 65.
- Betts, E. E. and MacLean, D. B.** *Lycopodium* alkaloids. V. Oxidation and reduction studies on annontinine and its derivatives, 211.
- Bishop, C. T.** Synthesis of 3,5-di-*O*-methyl-D-glucose, 61.
Constitution of an arabogalactan from jack pine (*Pinus banksiana* Lamb), 1010.
See also Schmorak, J., 108.
- Blanchard, L. P., Farmer, J. B., and Ouellet, C.** An investigation of the gas-phase oxidation of acetaldehyde by means of a rapid-scanning mass spectrometer, 115.
- Blanchard, L. P. and Le Goff, P.** Mass spectrometric study of the species CS, SO, and CCl₂ produced in primary heterogeneous reactions, 89.
- Blanchfield, R.** See Grant, G. A., 40; Smith, D. M., 156.
- Bockris, J. O'M.** See Conway, B. E., 1124.
- Boivin, J. L. and Tremblay, M.** Preparation of guanidine from ammonium thiocyanate, sulphur dioxide, and ammonia under pressure, 1260.
- Bolton, J. R. and McCallum, K. J.** Effect of changes in hydration on recoil fragments in neutron-irradiated permanganates, 761.
- Braun, R. O.** See McKay, A. F., 843.
- Breck, W. G.** See Frost, G. B., 1446.
- Bricknell, A. G., Trevo, L. W., and Spinks, J. W. T.** A study of sulphate in nitrocellulose using $S^{32}O_4^{2-}$ as tracer, 704.
- Bright, N. F. H.** See Morton, J. M., 1097.
- Brown, W. H. and Wright, G. F.** The syntheses and reactions of alkylated furans, 236.
- Brownell, H. H. and Purves, C. B.** The location and distribution of substituents in a purified hydroxyethyl cellulose, 677.
- Bryce, W. A.** See Kebabian, P., 576; Ryce, S. A., 1293.
- Burland, P. D. and Christian, J. D.** A note on ureido derivatives isolated as by-products in amino acid synthesis, 444.

- Bywater, S.** The polymerization of methacrylonitrile at elevated temperatures, 552.
See also Mackie, J. S., 570.
- Calvert, L. D.** See Heyding, R. D., 449, 1205.
- Campbell, H.** See Charlesworth, E. H., 351.
- Canady, W. J.** Comparison of effective ionic radii in solution, 1073.
See also Bavin, P. M. G., 1555.
- Carroll, K. K.** Preparation of erucic and nervonic acids labelled with carbon-14, 757.
- Channen, E. W.** See Petrie, S. E., 1534.
- Charlesworth, E. H., Campbell, H., Conn, J. J., Elston, C. T., and Stachiw, D. L.** Some acenaphthene compounds, 351.
- Charlson, A. J., Gorin, P. A. J., and Perlin, A. S.** The configuration of glycosidic linkages in oligosaccharides. IV. Further degradations of reducing disaccharides to 2-O-glycosyl-glycerols, 365.
- Charlwood, P. A. and Ens, A.** Effect of pH on the sedimentation of serum albumins and ovalbumin, 99.
- Chisholm, M. J. and Hopkins, C. Y.** An oxygenated fatty acid from the seed oil of *Hibiscus esculentus*, 358.
The normal C₁₇ fatty acids of musk-ox fat, 1434.
- Christian, J. D.** See Burland, P. D., 444.
- Clayton, D. W.** See Anet, R., 397.
- Clayton, R. N.** See Frost, G. B., 1446.
- Cockburn, W. F. and Bannard, R. A. B.** The reaction of acetic and trifluoroacetic anhydrides with some substituted guanidine hydrochlorides, 1285.
- Collin, J. and Lossing, F. P.** Free radicals by mass spectrometry. XIII. The mercury photosensitized decomposition of allene and butadiene: The C₃H₃ radical, 778.
- Conn, J. J.** See Charlesworth, E. H., 351.
- Conway, B. E. and Bockris, J. O'M.** Heats of activation in electrode processes. The electrochemical desorption mechanism of the discharge of hydroxonium ions, 1124.
- Cook, D.** The second virial coefficient of carbon dioxide at low temperatures, 268.
- Couture, A. M. and Laidler, K. J.** The entropies of ions in aqueous solution. II. An empirical equation for oxy-anions, 202.
The partial molal volumes of ions in aqueous solution. II. An empirical equation for oxy-anions, 207.
- Couture, A. M. and Ouellet, L.** Cinétique de l'hydrolyse de l'adénosine triphosphate en solution alcaline, 1248.
- Cox, R. H.** See Linburg, R. G., 1237.
- Cvetanović, R. J. and Doyle, L. C.** Mercury photosensitized decomposition of butylene oxide, 605.
- Dacey, J. R., Young, D. M., and McDougall, H. J.** The kinetics of adsorption of *n*-heptane on carbon black at low pressures, 689.
- Davidson, D. W.** The dielectric properties of methanol and methanol-*d*, 458.
- De Vries, T.** See McEwen, D. J., 1225.
- Dewar, M. J. S.** See Anet, F. A. L., 180.
- Diaper, D. G. M. and Kuksis, A.** Determination of lead by dithizone in a single phase water-acetone system, 1278.
- Dignam, M.** See Shaw, A. C., 322.
- Dignam, M. J., Forbes, W. G., and Le Roy, D. J.** Kinetics of the photochlorination of monochloromethyl chloroformate in the gas phase, 1341.
- Downes, K. W.** See Ingraham, T. R., 850.
- Doyle, L. C.** See Cvetanović, R. J., 605.
- Dullien, F.** Raman spectra and configuration of some α -furyl and α -benzofuryl ketoximes, 1366.
- Dunford, H. B., Harrison, A. G., and Thode, H. G.** Equilibrium constants for the sulphur isotope exchange between SO₂ and H₂SO₄, 817.
- Dvornik, D. and Edwards, O. E.** Atisine: Further degradation, 860.
- Dyne, P. J.** See Bardwell, J., 82.
- Edsberg, R. L.** See Elofson, R. M., 646.
- Edward, J. T.** The intrinsic viscosities of aqueous solutions of small molecules, 571.
- Edwards, O. E.** See Dvornik, D., 860.
- Elofson, R. M.** The infrared spectra of humic acids and related materials, 926.
- Elofson, R. M. and Edsberg, R. L.** Polarographic behavior of the viologen indicators, 646.
- Elston, C. T.** See Charlesworth, E. H., 351.
- Engel, C. R.** Steroids and related products. VII. The synthesis of 17 α -methylcorticosterone, 131.
- Ens, A.** See Charlwood, P. A., 99.
- Ens, A. and Murray, F. E.** A quantitative infrared spectrometric study of molecular association in alcohols, 170.
- Erskine, A. J. and Jones, J. K. N.** The structure of linseed mucilage. Part I, 1174.
- Excell, B. J.** See Wilkie, K. C. B., 795.
- Falconer, E. L.** See Sanyal, A. K., 1164.
- Falk, M. and Giguère, P. A.** Infrared spectrum of the H₃O⁺ ion in aqueous solutions, 1195.
- Farmer, J. B.** See Blanchard, L. P., 115.
- Favre, H. and Marinier, B.** Dérivés du triméthyl-1,8,8 bicyclo[3,2,1]octane. II. Sur les éthers cétoénoliques méthylliques et éthyliques de la triméthyl-1,8,8 bicyclo[3,2,1]octanedione-2,4, 278.
- Fenyès, J. G. E.** See Taurins, A., 423.
- Ferguson, J., Reeves, L. W., and Schneider, W. G.** Vapor absorption spectra and oscillator strengths of naphthalene, anthracene, and pyrene, 1117.

- Flengas, S. N. and Ingraham, T. R.** Voltaic cells in fused salts. Part I. The silver-silver chloride, cobalt-cobaltous chloride system, 1139.
Voltaic cells in fused salts. Part II. The systems: (a) silver-silver chloride, lead-lead chloride; (b) silver-silver chloride, zinc-zinc chloride; and (c) silver-silver chloride, nickel-nickelous chloride, 1254.
- Flood, E. A.** Stresses and strains in adsorbent-adsorbate systems. II, 48.
See also Lakhanpal, M. L., 887; Morton, J. M., 1097.
- Fontijn, A. and Spinks, J. W. T.** Addition of *n*-butyl mercaptan to 1-pentene on irradiation with X-rays or gamma rays. I. 140 kvp. X-rays, 1384.
Addition of *n*-butyl mercaptan to 1-pentene on irradiation with X-rays or gamma rays. II. Effect of rigorous drying and degassing, 1397.
Addition of *n*-butyl mercaptan to 1-pentene on irradiation with X-rays or gamma rays. III. Energy dependence, 140 kvp. to 24.5 Mev., 1410.
- Forbes, W. F.** See Jones, R. N., 504.
- Forbes, W. F. and Mueller, W. A.** Light absorption studies. Part VII. Concerning the relation between the infrared carbonyl stretching bands and ultraviolet spectra (B-bands) in ring substituted acetophenones, 488.
- Forbes, W. F., Mueller, W. A., Ralph, A. S., and Templeton, J. F.** Light absorption studies. Part VIII. The secondary band of acetophenones and benzoic acids in ultraviolet spectra, 1049.
- Forbes, W. G.** See Dignam, M. J., 1341.
- Forman, A. G.** See Lee, C. C., 220.
- Francis, J. E. and Leitch, L. C.** Organic deuterium compounds. XVII. A synthesis of deuterated methyl chloroform, 348.
Organic deuterium compounds. XVIII. Addition products of hydrogen and deuterium bromides to 1,1-dichloroethylene, 500.
- Frost, G. B., Breck, W. G., Clayton, R. N., Reddoch, A. H., and Miller, C. G.** The heat capacities of the crystalline and vacuum dehydrated form of magnesium sulphate monohydrate, 1446.
- Gagnon, P. E., Keirstead, K. F., and Newbold, B. T.** Reduction of halogenated nitrobenzenes, 1304.
Study of halogenated hydroxyphenazines, 1423.
- Gardner, J. A. F., Barton, G. M., and MacLean, H.** Occurrence of 2,7-dihydroxy-4-isopropyl-2,4,6-cycloheptatrien-1-one (7-hydroxy-4-isopropyltropolone) in western red cedar (*Thuja plicata* Donn.), 1039.
- Garmaise, D. L.** See McKay, A. F., 8.
- Gayer, K. H. and Leider, H.** The solubility of uranium(IV) hydroxide in solutions of sodium hydroxide and perchloric acid at 25° C., 5.
- Gendron, L. J. and Nicholls, R. V. V.** The structure of butadiene dimers produced by a free-radical chain-transfer mechanism, 1467.
- Gesser, H.** See Paterson, W. G., 1137.
- Giguère, P. A.** See Falk, M., 1195.
- Giguère, P. A. and Liu, I. D.** Kinetics of the thermal decomposition of hydrogen peroxide vapor, 283.
- Gingras, B. A. and Bayley, C. H.** Preparation of some pure polyoxyethyleneglycol ethers. Part I, 599.
- Goddard, E. D. and Benson, G. C.** Conductivity of aqueous solutions of some paraffin chain salts, 986.
- Golub, M. A.** Viscosity of natural rubber solutions at very low rates of shear, 381.
- Good, N. E.** See Robinson, J. R., 1578.
- Gorin, P. A. J.** 4-O-Methyl-D-glucuronic acid and 4-O-methyl-D-glucose, 595.
See also Charlson, A. J., 365.
- Gorin, P. A. J. and Perlin, A. S.** The configuration of glycosidic linkages in oligosaccharides. III. *O*- α -D-Mannopyranosyl-(1 \rightarrow 2)-*O*- α -D-mannopyranosyl-(1 \rightarrow 2)-D-mannose, 262.
- Goring, D. A. I.** See Nawab, M. A., 742.
- Graham, R. P. and VanDalen, E.** An amperometric titration of titanium, 418.
- Grant, G. A.** See Smith, D. M., 156; Winthrop, S. O., 281.
- Grant, G. A., Blanchfield, R., and Smith, D. M.** Triarylmethane compounds as redox indicators in the Schoenemann reaction. I. Mechanism of the Schoenemann reaction, 40.
- Greenhalgh, R.** See Martin-Smith, M., 409.
- Grummitt, W. E.** See Milton, G. M., 541.
- Guthrie, C. A., Spencer, E. Y., and Wright, G. F.** Bis-Organomagnesium reactions. I. Effect of solvation on enolization, 873.
- Haines, R. L.** See Leger, A. E., 799.
- Halpern, J.** See Armstrong, A. M., 1020.
- Hardwick, T. J.** The rate constant of the reaction between ferrous ions and hydrogen peroxide in acid solution, 428.
The kinetics of the oxidation of ferrous ion by hydrogen peroxide in the presence of dissolved hydrogen and carbon monoxide, 437.
- Harrison, A. G.** See Dunford, H. B., 817.
- Haug, A. and Smith, D. B.** Separation, molecular weight, and interactions of horse globin components, 945.
- Hayward, L. D.** See McKeown, G. G., 28, 992.
- Heyding, R. D. and Calvert, L. D.** Arsenides of transition metals: The arsenides of iron and cobalt, 449.
Arsenides of the transition metals. II. The nickel arsenides, 1205.

- Hites, R. D.** See Lieber, E., 832.
- Holbrook, K. A. and Ouellet, L.** The non-enzymatic hydrolysis of adenosine diphosphate, 1496.
- Holmes, J. M. and Beebe, R. A.** Adsorption studies on a series of heat treated Shawinigan acetylene carbon blacks, 1542.
- Hooley, J. G.** A recording vacuum thermobalance, 374.
A recording spoon gauge, 1414.
- Hopkins, C. Y.** See Chisholm, M. J., 358, 1434.
- Hoskin, F. C. G.** The attempted synthesis of two hexose phosphonate esters, 581.
- Howell, W. C.** See Pattison, F. L. M., 141.
- Hubley, C. E.** See Leger, A. E., 799.
- Hyde, J. C.** See Leger, A. E., 799.
- Hyne, J. B. and Robertson, R. E.** Reactions of arylsulphonic esters. VII. The heat capacity of activation for the ethanolsysis of methyl *p*-nitrobenzenesulphonate, 623.
- Ingraham, T. R.** See Flengas, S. N., 1139, 1254.
- Ingraham, T. R., Downes, K. W., and Marier, P.** The production of titanium trichloride by arc-induced hydrogen reduction of titanium tetrachloride, 850.
- Jackson, A. H. and MacDonald, S. F.** A synthesis of porphobilinogen, 715.
- Jones, J. K. N.** See Erskine, A. J., 1174; Wilkie, K. C. B., 795.
- Jones, J. K. N., Merler, E., and Wise, L. E.** The hemicelluloses present in aspen wood (*Populus tremuloides*). Part III. The constitution of pentosan and hexosan fractions, 634.
- Jones, J. K. N. and Thompson, J. L.** A synthesis of 5,6-dideoxy-D-xylohexose(5-deoxy-5-C-methyl-D-xylose), 955.
- Jones, R. N.** See Taurins, A., 423; Whittingham, D. J., 515.
- Jones, R. N., Forbes, W. F., and Mueller, W. A.** The infrared carbonyl stretching bands of ring substituted acetophenones, 504.
- Kebarle, P. and Bryce, W. A.** The decomposition of 1-butene and 1-butene-4-*d*₃ induced by methyl radicals, 576.
- Keirstead, K. F.** See Gagnon, P. E., 1304, 1423.
- Kelly, R. B.** A relationship between the conformations of cyclohexane derivatives and their physical properties, 149.
- Kirkwood, M. W. and Wright, G. F.** Mechanism of guanidine nitration. II. Tetraethylnitroguanidine, 527.
- Kommandeur, J., Korinek, G. J., and Schneider, W. G.** The activation energies of photoconduction for some aromatic hydrocarbons, 998.
- Korinek, G. J.** See Kommandeur, J., 998.
- Korinek, G. J. and Schneider, W. G.** On the proton magnetic resonance shift due to hydrogen bonding, 1157.
- Krehbiel, R. E. and Spinks, J. W. T.** Surface studies using ion exchange autochromatography, 294.
- Kreling, M.-E.** See McKay, A. F., 843, 1438.
- Kuksis, A.** See Diaper, D. G. M., 1278.
- Kulka, M. and Van Stryk, F. G.** Some aralkyl and aryl alkyl sulphides and disulphides, 519.
- Kvasnicka, E. A. and McLaughlin, R. R.** Studies of hydroxyl substituted guaiacyl compounds, 105.
- Laidler, K. J.** See Couture, A. M., 202, 207.
- Lakhanpal, M. L. and Flood, E. A.** Stresses and strains in adsorbate-adsorbent systems. IV. Contractions of activated carbon on adsorption of gases and vapors at low initial pressures, 887.
- Larose, P.** The effect of hydrogen chloride on the infrared spectrum of nylon, 1239.
- Laughton, P. M.** See Robertson, R. E., 1319.
- Lee, C. C., Forman, A. G., and Rosenthal, A.** Rearrangement studies with C¹⁴. III. The Friedel-Crafts alkylation of anisole with 2-phenylethyl-1-C¹⁴ chloride and 2-phenylethanol-1-C¹⁴, 220.
- Lee, C. C., Slater, G. P., and Spinks, J. W. T.** Rearrangement studies with C¹⁴. IV. The absence of rearrangement in the Schmidt reaction with 3-phenylpropionic acid-2-C¹⁴, 276.
- Leger, A. E., Haines, R. L., Hubley, C. E., Hyde, J. C., and Sheffer, H.** The solvolysis of 2-phenylethyl-1-C¹⁴ *p*-toluenesulphonate, 1417.
- Leger, A. E., Haines, R. L., Hubley, C. E., Hyde, J. C., and Sheffer, H.** The structure of aluminum di- and tri-soaps, 799.
- Le Goff, P.** See Blanchard, L. P., 89.
- Leider, H.** See Gayer, K. H., 5.
- Leitch, L. C.** Organic deuterium compounds. XVI. Synthesis of α -deuterated alkyl nitriles, 345.
See also Francis, J. E., 348, 500.
- Lemay, A. and Ouellet, C.** Influence de l'oxyde nitrique et d'autres inhibiteurs sur l'oxydation lente de l'éther, 124.
- Le Roy, D. J.** See Dignam, M. J., 1341; Pinder, J. A., 588.
- Lieber, E., Pillai, C. N., and Hites, R. D.** The reaction of nitrous acid with 4-substituted thiosemicarbazides, 832.
- Linburg, R. G. and Cox, R. H.** Stigmasta-3,5,22-triene and distigmasteryl ether, 1237.
- Lister, M. W.** Some observations on the hydrolysis of cyanogen chloride, 736.
A note on the hydrocarbon dibenzo(*cd,mn*)pyrene, 934.
- Liu, I. D.** See Giguère, P. A., 283.
- Lossing, F. P.** Free radicals by mass spectrometry. XII. Primary steps in the mercury photosensitized decompositions of acetone and acetaldehyde, 305.
See also Collin, J., 778.
- McBryde, W. A. E.** See Atkinson, G. F., 477.
- McCallum, K. J.** See Bolton, J. R., 761.

- McDermot, H. L.** See Wilson, L. G., 15.
MacDonald, S. F. See Jackson, A. H., 715.
McDougall, H. J. See Dacey, J. R., 689.
McEwen, D. J. and De Vries, T. Polarography of uranium. III. Uranium(VI) in fluoride media, 1225.
McIntosh, R. See Moffat, J. B., 1511; Nickerson, J. D., 1325; Petrie, S. E., 183, 1534; Quinn, H. W., 745.
McKay, A. F. and Garmaise, D. L. A new synthesis of 1-substituted-2,3,5,6-tetrahydro-1-imidazole (1,2-a)imidazoles, 8.
McKay, A. F. and Kreling, M.-E. Preparation and chemistry of Δ^8 -hexahydro-1,4,8-pyrimidazole, Δ^8 -1,5,9-triazabicyclo(4.4.0)decene, and Δ^2 -1,4,9-triazabicyclo(5.3.0)decene, 1438.
McKay, A. F., Kreling, M.-E., Paris, G. Y., Braun, R. O., and Whittingham, D. J. Chemistry of 2,3,5,6-tetrahydro-1-imidazole (1,2-a)imidazole, 843.
McKay, A. F. and Steyermark, P. R. 1,1-Disubstituted-2-nitroguanidines, 1375.
McKeown, G. G. and Hayward, L. D. Selective substitution in sucrose. II. The synthesis of 2,3,3',4,4'-penta-O-methyl sucrose and C₄ to C₆ acetyl migration in sucrose, 992.
McKeown, G. G., Serenius, R. S. E., and Hayward, L. D. Selective substitution in sucrose. I. The synthesis of 1',4,6'-tri-O-methyl sucrose, 28.
Mackie, J. S. and Bywater, S. The kinetics of the thermal decomposition of dimethyl-2,2'-bis- α -isobutyrate, 570.
McLaughlin, R. R. See Kvasnicka, E. A., 105.
MacLean, D. B. See Betts, E. E., 211.
MacLean, H. See Gardfjer, J. A. F., 1039.
de Maine, P. A. D. Iodine complexes in inert solvents. VII. Thermodynamic constants and spectroscopic data for the reaction $2I_2 \rightleftharpoons I_4$ in carbon tetrachloride, 573.
Marier, P. See Ingraham, T. R., 850.
Marinier, B. See Favre, H., 278.
Marion, L. See Anet, R., 397; Martin-Smith, M., 37, 409; Massicot, J., 1; Przybylska, M., 1075; Seaton, J. C., 1102.
Marion, L. and Sargent, K. The olefinic bond in gelsemine, 301.
Martin-Smith, M., Greenhalgh, R., and Marion, L. The structure of annotinine, 409.
Martin-Smith, M. and Marion, L. The papilionaceous alkaloids. XXIII. The structure of baptifoline, 37.
Mason, S. G. See Nawab, M. A., 742.
Massicot, J. and Marion, L. Biogenesis of alkaloids. XVIII. The formation of hordenine from phenylalanine in barley, 1.
Menon, C. C. and Santappa, M. Photo-initiated free radical polymerization of methyl acrylate in aqueous solution, 1267.
Merler, E. See Jones, J. K. N., 634.
Miles, K. E. See Turner, R. C., 1002.
Miller, C. G. See Frost, G. B., 1446.
Miller, G. H. and Bakhtiar, A. K. The growth of butadiene popcorn polymer in the presence of methyl methacrylate monomer, 584.
Milton, G. M. and Grummitt, W. E. Ion-exchange methods for the quantitative separation of the alkaline earths, and their application to the determination of Sr⁹⁰ in milk ash, 541.
Mitra, A. K. and Perlin, A. S. The configuration of glycosidic linkages in oligosaccharides. V. The sucrose linkage in raffinose and stachyose, 1079.
Moffat, J. B. and McIntosh, R. The preparation and sintering of finely divided sodium chloride. II, 1511.
Moore, A. M. and Thomson, C. H. Ultraviolet irradiation of pyrimidine derivatives. I. 1,3-Dimethyluracil, 163.
Morton, J. M., Flood, E. A., and Bright, N. F. H. Preparation of distillbene (1,2,3,4-tetraphenylcyclobutane), 1097.
Mueller, W. A. See Forbes, W. F., 488, 1049; Jones, R. N., 504.
Murray, F. E. See Ens, A., 170.
Nawab, M. A., Goring, D. A. I., and Mason, S. G. A dilution viscometer for foaming liquids, 742.
Neubauer, L. G. and Purves, C. B. Structure of a hemicellulose from maple wood previously extracted by liquid ammonia, 388.
Newbold, B. T. See Gagnon, P. E., 1304, 1423.
Nicholls, R. V. V. See Gendron, L. J., 1467.
Nickerson, J. D. and McIntosh, R. Dielectric constants of liquid sulphur dioxide, ethyl chloride, and ethylene oxide, 1325.
O'Brien, R. N. The use of a Twyman-Green type interferometer to measure diffusivities in an electrodeposition cell, 932.
Ouellet, C. See Blanchard, L. P., 115; Lemay, A., 124.
Ouellet, L. See Couture, A. M., 1248; Holbrook, K. A., 1496.
Fallen, R. H. and Sivertz, C. The photoinitiated addition of mercaptans to olefins. III. The kinetics of the addition of thiophenol to styrene and to 1-octene, 723.
Paris, G. Y. See McKay, A. F., 843.
Park, W. R. R. and Wright, G. F. Oxymercuration of the methylcyclohexenes, 1088.
Paterson, W. G. and Gesser, H. The photolysis of ketene at low temperatures, 1137.
Pattison, F. L. M., Howell, W. C., and Woolford, R. G. Toxic fluorine compounds. XIII. ω -Fluoroalkyl ethers, 141.
Perlin, A. S. See Charlson, A. J., 365; Gorin, P. A. J., 262; Mitra, A. K., 1079.

- Petrie, S. E. and McIntosh, R.** Anomalous apparent dielectric constants of gases on several porous adsorbents, 183.
- Petrie, S. E., McIntosh, R., and Channen, E. W.** The temperature dependence of apparent dielectric constants of adsorbates on non-porous titanium dioxide, 1534.
- Pillai, C. N.** See Lieber, E., 832.
- Pinder, J. A. and Le Roy, D. J.** Addition of ethyl radicals to ethylene, 588.
- Pople, J. A.** See Bernstein, H. J., 65; Schneider, W. G., 1487.
- Pople, J. A., Schneider, W. G., and Bernstein, H. J.** The analysis of nuclear magnetic resonance spectra. II. Two pairs of two equivalent nuclei, 1060.
- Pritchard, G. O. and Steacie, E. W. R.** The gas phase reaction of methyl radicals with hexafluoroacetone, 1216.
- Przybylska, M. and Marion, L.** The crystal and molecular structure of annotinine bromohydrin, 1075.
- Purves, C. B.** See Adamek, E. G., 960; Brownell, H. H., 677; Neubauer, L. G., 388; Sanyal, A. K., 1164; Swan, E. P., 1522.
- Quinn, H. W. and McIntosh, R.** The hysteresis loop in adsorption isotherms on porous Vycor glass and associated dimensional changes of the adsorbent. II, 745.
- Ralph, A. S.** See Forbes, W. F., 1049.
- Rao, C. N. R.** Nature of the adsorption process responsible for Joshi effect, 101.
- Rao, C. N. R., Wahl, W. H., and Williams, E. J.** A correlation of electric dipole moments of substituted benzenes by reactivities, 1575.
- Rayson, H. W. and Alexander, W. A.** Isopiestic techniques applied to phase diagram determination in the systems silver-cadmium and copper-cadmium, 1571.
- Read, D.** See Rosenthal, A., 788.
- Reddoch, A. H.** See Frost, G. B., 1446.
- Reeves, L. W.** Nuclear magnetic resonance measurements in solutions of acetylacetone. The effect of solvent interactions on the tautomeric equilibrium, 1351.
See also Ferguson, J., 1117.
- Reeves, L. W. and Schneider, W. G.** Nuclear magnetic resonance measurements of complexes of chloroform with aromatic molecules and olefins, 251.
- Rivest, R.** See Archambault, J., 879.
- Rizk, H. A.** See Tourky, A. R., 630.
- Robertson, R. E.** Reactions of sulphonic esters. VI. The temperature dependence of the rate for the hydrolysis of a series of alkyl benzenesulphonates, 613.
See also Hyne, J. B., 623.
- Robertson, R. E. and Laughton, P. M.** Solvolysis in hydrogen and deuterium oxide. II. Strongly solvated substrates, 1319.
- Robinson, J. R.** The synthesis of 3-indoleacetic acid- C^{14} labeled in the benzene ring, 1570.
- Robinson, J. R. and Good, N. E.** Synthesis of indoleacetic acids, 1578.
- Rodgman, A., Shearer, D. A., and Wright, G. F.** Reversibility of alkene oxymercuration, 1377.
- Ronwin, E.** N-Acylated amino acid imino chlorides and a qualitative study of ring closure among N-acylamino acid chlorides, 1031.
- Rosenthal, A.** See Lee, C. C., 220.
- Rosenthal, A. and Read, D.** The reaction of unsaturated carbohydrates with carbon monoxide and hydrogen. I. Branched-chain carbohydrate from 3,4,6-tri-O-acetyl-D-galactal, 788.
- Roy, L. P. and Yaffe, L.** Search for successive neutron capture reactions on Mg^{26} , Si^{30} , and Cr^{54} , 176.
- von Rudloff, E., Stuetz, D. E., and Bauer, H. F.** Hydrogenolysis of carbohydrates. II. Reduction of methyl α -D-glucopyranoside, 315.
- von Rudloff, E. and Tulloch, A. P.** Hydrogenolysis of carbohydrates. III. Further observations on the reduction of methyl α -D-glucopyranoside, 1504.
- Ryan, D. E.** See Armour, C. A., 1454.
- Ryce, S. A. and Bryce, W. A.** An ionization gauge detector for gas chromatography, 1293.
- Sandri, R.** On flame propagation in explosive mixtures of gases. IV. On the decomposition flame of ozone in mixtures rich in ozone, 474.
- Santappa, M.** See Menon, C. C., 1267.
- Sanyal, A. K., Falconer, E. L., Vincent, D. L., and Purves, C. B.** Attempted location of the substituent in cellulose xanthate by new methods, 1164.
- Sargent, K.** See Marion, L., 301.
- Scaife, J. F.** The solubility of malachite, 1332.
- Schmorak, J., Bishop, C. T., and Adams, G. A.** Constitution of a degraded polysaccharide from wheat bran, 108.
- Schneider, W. G.** See Bernstein, H. J., 65; Ferguson, J., 1117; Kommandeur, J., 998; Korinek, G. J., 1157; Pople, J. A., 1060; Reeves, L. W., 251.
- Schneider, W. G., Bernstein, H. J., and Pople, J. A.** The analysis of nuclear magnetic resonance spectra. III. Pyridine and deuterated pyridines, 1487.
- Seaton, J. C. and Marion, L.** The structure of rhyncophylline, 1102.
- Semple, R. E.** See Wilkie, K. C. B., 795.
- Serenius, R. S. E.** See McKeown, G. G., 28.
- Shaw, A. C. and Dignam, M.** Chromatography of waste sulphite liquor, 322.
- Shearer, D. A.** See Rodgman, A., 1377.
- Sheffer, H.** See Leger, A. E., 799.
- Sivertz, C.** See Pallen, R. H., 723.
- Slater, G. P.** See Lee, C. C., 276, 1417.

- Smith, D. B.** See Haug, A., 945.
Smith, D. M. See Grant, G. A., 40.
Smith, D. M., Blanchfield, R., Thompson, J. L., and Grant, G. A. Triarylmethane compounds as redox indicators in the Schoenemann reaction. II. Syntheses of the triarylmethanes, 156.
Spencer, E. Y. See Guthrie, C. A., 873.
Spinks, J. W. T. See Bricknell, A. G., 704; Fontijn, A., 1384, 1397, 1410; Krehbiel, R. E., 294; Lee, C. C., 276, 1417; Woods, R. J., 1475.
Stachiw, D. L. See Charlesworth, E. H., 351.
Steacie, E. W. R. See Pritchard, G. O., 1216; Tanaka, I., 821.
Stewart, R. Hydride transfer to carbonium ions. I. The mechanism of the reduction of triphenylmethyl carbonium ion in formic acid, 766.
Stewart, R. and Walker, L. G. The polar effect of the β -nitrovinyl group, 1561.
Steyermark, P. R. See McKay, A. F., 1375.
Stuetz, D. E. See von Rudloff, E., 315.
Swan, E. P. and Purves, C. B. The location of the xanthate groups in partly substituted cellulose xanthates, 1522.
Taber, W. A. See Vining, L. C., 1109, 1461.
Tanaka, I. and Steacie, E. W. R. Sensitized photoionization, 821.
Taurins, A., Fenyes, J. G. E., and Jones, R. N. Thiazoles. III. Infrared spectra of methylthiazoles, 423.
Taylor, G. W. Gas phase reactions of phenyl radicals, 739.
Taylor, J. D. See Woods, R. J., 941.
Templeton, J. F. See Forbes, W. F., 1049.
Thode, H. G. See Dunford, H. B., 817.
Thompson, J. L. See Jones, J. K. N., 955; Smith, D. M., 156.
Thomson, C. H. See Moore, A. M., 163.
Timell, T. E. Vegetable ivory as a source of a mannan polysaccharide, 333.
Tourky, A. R. and Rizk, H. A. The dipole moments of mercuric chloride and mercuric bromide in benzene, 630.
Tremblay, M. See Boivin, J. L., 1260.
Trevoy, L. W. See Bricknell, A. G., 704.
Tulloch, A. P. See von Rudloff, E., 1504.
Turner, R. C. and Miles, K. E. The ultraviolet absorption spectra of the ferric ion and its first hydrolysis product in aqueous solutions, 1002.
VanDalen, E. See Graham, R. P., 418.
Van Stryk, F. G. See Kulka, M., 519.
Vincent, D. L. See Sanyal, A. K., 1164.
Vining, L. C. and Taber, W. A. Amidomycin, a new antibiotic from a *Streptomyces* species, chemical structure, 1109.
Separation of endomycins A and B, and their identification as members of the polyene groups of antifungal antibiotics, 1461.
Wahl, W. H. See Rao, C. N. R., 1575.
Walker, L. G. See Stewart, R., 1561.
Whalley, E. Mechanism of the decomposition of ethylene when photosensitized by metal vapors, 565.
Whittingham, D. J. See McKay, A. F., 843.
Whittingham, D. J. and Jones, R. N. The preparation of methyl bisnorcholestanate, 515.
Wiles, D. M. and Winkler, C. A. The reaction of active nitrogen with hydrogen chloride, 1298.
Wilkie, K. C. B., Jones, J. K. N., Excell, B. J., and Semple, R. E. The fractionation of polysaccharides by the method of ultrafiltration, 795.
Williams, E. J. See Rao, C. N. R., 1575.
Wilmschurst, J. K. "Sensitive" vibrational frequencies. Part 2. The methylene and methine frequencies and their relation to electronegativity, 937.
Wilmschurst, J. K. and Bernstein, H. J. The infrared and Raman spectra of disulphur decafluoride (S_2F_{10}), 191.
The infrared spectra of CH_4 , CH_3D , CH_2D_2 , CD_3H , and CD_4 , 226.
Internal rotation. X. The Raman spectrum of liquid 1-chloro-2-bromoethane-1,1- d_2 , 734.
The infrared and Raman spectra of toluene, toluene- α - d_3 , *m*-xylene, and *m*-xylene- $\alpha\alpha'$ - d_8 , 911.
The infrared and Raman spectra of $HC(CD_3)_3$ and $DC(CD_3)_3$, 969.
The vibrational spectra of pyridine, pyridine-4- d , pyridine-2,6- d_2 , and pyridine-3,5- d_2 , 1183.
Wilson, L. G. and McDermot, H. L. The structure of artificial graphites as revealed by X-ray, electron microscope, and adsorption studies, 15.
Winkler, C. A. See Wiles, D. M., 1298.
Winthrop, S. O. and Grant, G. A. 2-(β -Dialkylaminoethylmercapto)-2-imidazolines, 281.
Wise, L. E. See Jones, J. K. N., 634.
Woods, R. J. and Spinks, J. W. T. The action of Co^{60} gamma rays and of Fenton's reagent on aqueous bromal hydrate solutions, 1475.
Woods, R. J. and Taylor, J. D. Notes on the preparation and use of ^{14}C -labelled vitamin K_1 and vitamin K_3 , 941.
Woolford, R. G. See Pattison, F. L. M., 141.
Wright, G. F. See Allentoff, N., 900; Brown, W. H., 236; Guthrie, C. A., 873; Kirkwood, M. W., 527; Park, W. R. R., 1088; Rodgman, A., 1377.
Yaffe, L. See Roy, L. P., 176.
van Zeggeren, F. and Benson, G. C. A determination of the surface free energy of sodium chloride, 1150.

Young, D. M. See Dacey, J. R., 689.

Yoshino, T. and Bernstein, H. J. Internal rotation. IX. The infrared and Raman spectra of liquid normal alkyl bromides, 339.

CORRECTIONS

Volume 35, 1957.

Page 281. The heading of paragraph 2 of Experimental should read: "2-(β -Diisopropylaminoethyl-mercapto)-2-imidazolinium Chloride Hydrochloride".

The heading of paragraph 3 of Experimental should read: "2-(β -Diethylaminoethyl-mercapto)-2-imidazolinium Chloride Hydrochloride".

Page 454. On this page and in Table V the space group symbol for CoAs is erroneously given as *Pnma*. For the setting chosen this should read *Pm \bar{c} n*.

Page 915. The portion two inches down from the heading on the right side of Table I should read:

1802 ms	1794 } A	785 + 1030 = 1815 (<i>A</i> ₁)
	1800 } A	
	1807 } A	
1858 ms	1851 } B	785 + 1081 = 1866 (<i>B</i> ₁)
	1861 } B	

Volume 34, 1956.

In the paper *A method of recording a-c. polarograms on a conventional d-c. polarograph* by D. M. Miller, pp. 942-947, Fig. 3 on p. 945 should be replaced by the figure appearing below.

